

ABSTRACT OF THE DISCLOSURE

Disclosed is a directly modulated distributed feedback laser diode optical transmitter using a vestigial side band modulation. The optical transmitter comprises an
5 electric signal generator converting inputted signals into electric signals; a distributed feedback laser diode converting the electric signals into optical signals; and an optical tunable filter for setting a central wavelength configured to filter the optical signals using a central wavelength, perform a vestigial side band modulation of the optical signals by degenerating a determined band of the optical signals using central wavelength, and reduce
10 the band width of the optical fibers, thereby improving the extinction ratio. By applying an optical tunable filter of a vestigial side band modulation type to an optical transmitter using a directly modulated distributed feedback laser diode, the band width of optical signals for a transmission can be reduced.